

What is claimed is:

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1. Fluid sealing apparatus for operation with an endoscopic instrument at a surgical site, the apparatus comprising:

a body having a central bore dimensioned to receive an endoscopic instrument therein, the bore extending through the body between distal and proximal ends thereof;

an element disposed about the body near one of the distal and proximal ends thereof for selectively expanding outwardly from the body;

and

a fluid seal disposed about the body near the other of the distal and proximal ends having an aperture therethrough substantially aligned with the central bore through the body, and having an inner dimension resiliently and flexibly disposed to receive an endoscopic instrument therein in sliding fluid-sealing engagement therewith.

2. The apparatus according to claim 1 in which the element includes a balloon of substantially toroidal-shape attached to an outer surface of the body near the distal end thereof; and comprising:

a fluid passage in a wall of the body in communication with the balloon and extending along the wall toward the proximal end of the body

for connection to a source of fluid under pressure for selectively inflating the balloon.

3. The apparatus according to claim 1 in which the fluid seal includes a generally toroidally-shaped member disposed in fluid-sealing engagement with the body near the proximal end thereof.

4. An endoscopic surgical procedure performed through an access port, the procedure comprising:

- forming an incision in tissue;
- dissecting tissue to form an anatomical space in tissue in communication with the incision;
- inserting the access port within the incision and anatomical space in fluid-sealing engagement with tissue about the incision;
- inserting an endoscopic instrument into the anatomical space through the access port;
- forming a fluid-tight seal in the access port in response to insertion of the endoscopic instrument in the access port;
- insufflating the anatomical space with fluid under pressure during formation of the fluid-tight seal; and

deflating the anatomical space inflated with fluid under pressure upon termination of the fluid-tight seal about an endoscopic instrument within the access port.

5. A body for an access port for insufflating a surgical site, comprising:

the body including a central bore therethrough from a distal end to a proximal end thereof and including on an outer wall thereof near the distal end an attachment site for an inflatable balloon;

a fluid passage within a wall of the body communicating with the attachment site and with a fluid inlet to form a fluid channel for selectively inflating a balloon at the attachment site with fluid under pressure supplied to the inlet;

the body including near the proximal end thereof an attachment rim for receiving thereat a resilient sealing member to form a fluid-tight seal with the body and with an aperture therein substantially aligned with central bore; and

the body including an insufflation inlet disposed intermediate the distal and proximal ends in communication with the central bore.

6. The body of an access port according to claim 5 including a section intermediate the proximal and distal ends for

transitioning from the central bore near the distal end to a larger internal bore near the proximal end.

7. The body of an access port according to claim 6 in which the insufflation inlet communicates with the central bore and larger internal bore within the transition section.

8. The body of an access port according to claim 6 in which the fluid inlet is disposed proximate the transition section of the body and near the insufflation inlet.

9. The body of an access port according to claim 5 in which the attachment rim includes a recessed groove within an outer wall of the body near the proximal end thereof for receiving a resilient sealing member therein in fluid-tight seal with the body.

10. An access port kit including:  
a body having a central bore therethrough between distal and proximal ends thereof;  
an element disposed about the body near the distal end thereof for selectively expanding outwardly from the body;  
a plurality of resilient fluid seals for forming fluid-tight seals near the proximal end of the body, each including a resilient aperture

therethrough of selected different dimensions disposed to axially align with the central bore in the body in position individually supported thereon.

11. An access port kit including:

a body having a central bore therethrough between distal and proximal ends thereof;

an element disposed about the body near the distal end thereof for selectively expanding outwardly from the body;

at least one resilient fluid seal for attachment in fluid-tight engagement with the body near the proximal end thereof, and including a resilient aperture therethrough of selected dimension to axially align with the central bore upon attachment to the body; and

an auxiliary resilient fluid seal for insertion within the resilient aperture of the resilient fluid seal to form a fluid-tight seal therewith, including an aperture therein of smaller dimension than the resilient aperture of the resilient gas seal for forming a sliding, substantially fluid-tight seal about a cylindrical member of sectional dimension larger than the aperture in the auxiliary resilient fluid seal and smaller than the aperture in the resilient fluid seal.

12. A sealing member for an insufflation access port having a body with a central bore therethrough between distal and proximal ends

thereof, the sealing member for attachment to the proximal end of the body, comprising:

a hollow cylinder of resilient material having a distal end disposed to insert within the central bore of the body at the proximal end thereof and including an outwardly extending flange integrally formed on the proximal end of the body, the flange including an aperture therethrough in position to substantially align with the central bore of the body upon attachment thereto for receiving therein an endoscopic instrument in fluid-tight sliding sealing engagement within the aperture.

13. The sealing member according to claim 12 for attachment to the body of an access port having a recessed groove about the periphery of the body near the proximal end thereof, the flange of the sealing member comprising:

a substantially cylindrical section extending substantially concentrically with the hollow cylinder toward the distal end thereof and terminating with an inwardly intruding rim integrally formed with the cylinder section, the flange and the hollow cylinder, said rim being dimensioned and positioned to engage the recessed groove about the periphery of the body in fluid-tight sealing engagement therein.

14. The sealing member according to claim 12 including a protruding ring integrally formed about the cylinder near the distal end thereof for deforming within the central bore of the body to form a fluid-tight seal therewith.

15. The sealing member according to claim 12 including an intruding ring integrally formed on said intruding rim for deforming within the recessed groove to form a fluid-tight seal therein.

16. An auxiliary sealing member for insertion within the aperture of the sealing member of claim 12, comprising:

a hollow cylinder of resilient material including an end segment integrally formed on a proximal end of the cylinder having an aperture therethrough, and having an outwardly protruding flange integrally formed about a distal end thereof, the hollow cylinder of the auxiliary sealing member being dimensioned to form a fluid-tight seal within the aperture of the sealing member, and the protruding flange on the distal end of the auxiliary sealing member being disposed to engage the distal end of the sealing member for retaining the auxiliary sealing member within the aperture of the sealing member.